UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,918	03/24/2004	Stefan Berg	1103326-0527 CON	3973

7470 7590 02/23/2005

WHITE & CASE LLP
PATENT DEPARTMENT
1155 AVENUE OF THE AMERICAS
NEW YORK, NY 10036

EXAMINER	
BERNHARDT, EMILY B	
ART UNIT	**PAPER NUMBER**
1624	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/807,918	BERG ET AL.	
	Examiner	Art Unit	
	Emily Bernhardt	1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1,2,4-15,17-19,21,30,31,33 and 34 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1,2,4-15,17-19,21,30,31,33 and 34 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/171,575.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claims 18,21,30,33 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. Claims 18,21,30 and 33 are of indeterminate scope as the claim language may read on disorders not yet known to be associated with serotonin 5 HT receptors or in ways not yet understood especially since there are many receptor types and subtypes currently being evaluated. Furthermore how does one determine who is in need and who is not of such "treatment"? What distinguishes a host in need of such treatment vs. one who is not in need? 5-HT receptors may be involved in all diseases so how can one be sure that any use of claim's 1 scope does not infringe these claims? Additionally, determining whether a given disease responds or not to such a mode of action involves much experimentation since a negative response from one patient does not mean the drug isnt useful as no drug has 100% effectiveness. Thus what "success rate" determines if a particular drug is effective and how many patients (and dosage regimens) need to be tested? The test for determining compliance with 35 USC 112, par.two is whether applicants have clearly defined "their" invention not what may be discovered by future research as this type of claim language clearly requires.

It is noted that claims 18 and 21 are substantial duplicates .

2. Claim 34 shows the preparation of piperazines not piperidines which are covered by claim 1. Note reagent employed can only make piperazines and thus applicants' intent is not clear. Should applicants amend this claim to cover making piperazines note that double patenting rejection will be made as earlier parent (US'498) alreadys covers this process.

Claims 1,2,4-15,17-19,21,30,31,33,34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The following reasons apply:

1. Scope of "solvates" which is embraced by all the claims is not remotely enabled based on the teachings of the specification which particularly describe only hydrates. Generally not all solvents can form solvates with all compounds. There is no process enabling such a scope in the specification .

2. Uses covered by the method claims (18,19,21,30,31,33) are not remotely enabled by the teachings of the specification on p.25 which describe an assay test for screening compounds for 5-HT1B agonist or antagonistic activity.

Note the criteria for enablement as set out in In re Wands cited in MPEP 2164.01(a),August 2000 edition, which includes factors such as:

1) Breadth of the claims- The claims cover compounds easily in the millions;

2) Level of unpredictability in the art- The invention is pharmaceutical in nature involving activity at one or more serotonin receptors. It is well established that "the scope of enablement varies inversely with the degree of unpredictability of the factors involved" and physiological activity is generally considered to be unpredictable. See In re Fisher 166 USPQ 18. The Guo publication published after applicants' filing date evidences activity is sensitive to structure at various locations of the piperazinedione ring. See discussion beginning on p.1719 of the publication, provided herewith;

3) Direction or guidance- The amount of guidance presented in the specification as to which compounds are sufficiently active as agonists or antagonists to be useful for the claimed uses is nonexistent. The dosage range information (on p.9) is virtually useless being a 10,000 fold range and not directed to a specific disease;

4) State of the prior art- The compounds are indanyl-substituted piperidines with a certain substitution pattern at variables Y and R3. No such compounds are known in the prior art much less those having the instant activity;

5) Working examples- No test data has been presented only description of assay testing protocols and thus it is by no means clear how active these compounds actually are. Thus in the absence of animal studies and in the absence of any correlation between studies conducted **in vitro** and the diseases to be treated, there is no sufficient evidence to support the claimed uses;

6) Level of skill in the art- References such as Gaster and Jones, provided with this action, as well as Halazy, cited by applicants, do not evidence that the current state of the art is one in which 5-HT1B agonists/antagonists have such a range of uses. At best agonists are being used to treat migraine and antagonists to treat depression. Note that Jones was published well after applicants' effective filing date and thus does not reflect that 5-HT1B agonists or antagonists are well known for treating disorders as varied and all encompassing as Parkinson's disease, various forms of addictions, all endocrine, thermoregulatory disorders, all tumor growths, etc. Thus the level of skill is low not high. Where the utility is unusual or difficult to treat or speculative, the examiner has authority to require evidence that tests relied on are reasonably predictive of in vivo efficacy by those skilled in the art. See for example, In re Ruskin 148 USPQ 221; Ex parte Jovanovics 211 USPQ 907. Note MPEP. 2164.05(a).

In view of the above considerations, this rejection is being applied.

Applicants' IDS filed 10/6/04 has been considered except for the Gothert article. Note the source of the document is not listed only the publishers and the examiner is currently unable to obtain the parent files to see the correct citation. Clarification is needed to avoid a printer query.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Bernhardt whose telephone number is 571-272-0664.

If attempts to reach the examiner by telephone are unsuccessful, the acting supervisor for AU 1624, James O. Wilson can be reached at 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

E Bernhardt

Emily Bernhardt
Primary Examiner
Art Unit 1624